

**LAKE COUNTY WATER AUTHORITY
REGULAR MEETING ANNOUNCEMENT AND SUMMARY AGENDA**

March 24, 2010 – 3:30 p.m.

Lake County Administration Building

2nd Floor - County Commission Chambers

315 West Main Street, Tavares, FL 32778

1. Call to Order / Pledge of Allegiance

2. Approval of Minutes – Regular Board Meeting of February 24, 2010

3. Executive Director Report

4. Discussion Items

Presenter

a. Request to Hold Renaissance Faire at Hickory Point

Michael Perry

The Educational Foundation of Lake County has been holding a Renaissance Faire at Hickory Point for the past several years as a way to generate funds for the Foundation. While there have been some issues in previous years; however the Education Foundation addressed all concerns brought to their attention in a complete and timely manner during this recent event.

At the June 2005 meeting, the Board established a revised fee schedule for large groups. For events with over 1000 attendees, the event sponsors must negotiate the fees with the Executive Director. For the 2009 event, the Lake County Education Foundation paid a rental fee of \$1,500, including a \$5,000 deposit and abided by the same rules and policies that were set forth in previous agreements. The Board approved this rental fee for the 2009 event, although the event rental fee was substantially less than what a large group would be charged under the attached current fee schedule.

Executive Director Recommendation:

Allow the Lake County Educational Foundation to hold a Renaissance Faire at Hickory Point for one weekend in November 2010 with the following conditions: The fees for the use of the Park will be consistent with the recently revised fee schedule for large groups and no less than the fees in the most recent agreement; vendors and performers must camp away from Hickory Point (the only exception may be the jousters); that the Lake County Educational Foundation and the Lake County Water Authority execute an agreement which clearly identifies the responsibilities of the Water Authority and the Educational Foundation.

b. Results of Field Visit to Big Creek

Ron Hart

At the February 2010 Board meeting, resident Don Tracy expressed his concern that the Clermont Chain was unreasonably low compared to the other lake chains in the area and requested the agency inspect the waterways coming from the Green Swamp. As a result, the Board directed staff to meet with Trustee Fullerton and resident Don Tracy and tour any locations in the Green Swamp where there could be potential blockages to flow. Staff, along with Mr. Tracy and Trustee Fullerton visited several locations to determine if flow was being restricted. At all of the culverts visited, water was flowing through culverts with no obvious

impediment to flow. Staff will review this field excursion in more detail with the board at the March meeting.

Executive Director's Recommendation:

For information purposes only. No action required.

c. Fred Hunter Conservation Easement Letter of Support **Patricia Burgos**

At the February 24th Board Meeting, Mr. Fred Hunter approached the LCWA Board and requested a letter of support from the agency as part of his endeavor to have the state purchase his development rights through a conservation easement on 423 acres he owns outside of Paisley. Board directed staff to work with Mr. Hunter and bring this issue back to the March 24th Board meeting for discussion.

On March 10th staff met with Mr. Hunter to take a tour of the property and provide a quick assessment of the water resource value of his property for the letter of support. Mr. Hunter was a gracious host as he toured Mr. Lumbard and Ms. Burgos to different areas of the property that he has owned since the 1970's. Staff specifically visited three waterbodies within the property partly (Blue Lake) and wholly owned (Scrub Jay Pond, Lost Lake) by Mr. Hunter.

Highlights of the tour/information about the property:

- This property is located within the Wekiva-Ocala Corridor and Wekiva River Basin, identified for conservation over 10 years ago by the state;
- Staff was pleasantly surprised at the three oligotrophic lakes (low nutrient) within the property as compared to the more familiar eutrophic lakes (high nutrient) found on the Harris Chain;
- The water clarity on Scrub Jay Pond up to 10 feet near shore to 20 feet at the center of the lake;
- A water sample from Scrub Jay Pond was collected by Mr. Lumbard and found to have a pH of 5.6 as compared to pH of 8.0+ on the Harris Chain. As a result no fish or invertebrates were observed by staff at Scrub Jay Pond. An optimum pH for fish & invertebrates is between 6.5 – 8.2;
- 26-acre Blue Lake was part of the Florida LAKEWATCH program between May 23, 1995 and November 6, 2006. Mr. Hunter would like to continue when he finds a less strenuous way to collect the samples;
- The amount of work Mr. Hunter has done to restore the scrub areas, not only making the habitat more conducive for Scrub Jays, but also more beneficial for the property's aquifer recharge capacity. According to St. Johns River Water Management District data this area of Lake County has recharge potential of up to 12 inches per year;
- Staff did not observe any invasive, exotic vegetation surrounding the pond and lakes; and
- Researching the ownership parcels surrounding Mr. Hunter, staff found out that Seminole State Forest is to the west and south of the property and the Ocala National Forest is to the north further bolstering a wildlife/conservation corridor connection and preservation of any hydrologic connections.

Staff would recommend a letter of support from the Board on behalf of Mr. Hunter. Mr. Hunter will be present at the meeting for any questions. Mr. Hunter also asked if the Water Authority could install a staff gauge on Scrub Jay Pond to assist in gathering water level data for this area.

Executive Director Recommendation:

1. Authorize staff to send the Board-approved letter of support to the Florida Department of Environmental Protection for the Fred Hunter conservation easement.
2. Direct staff to work with Mr. Hunter regarding the staff gauge request.

d. Review of First Year of NuRF Operation

Lance Lumbard

The Lake County Water Authority's Nutrient Reduction Facility (NuRF) completed its first year of operation on March 2, 2010. During this period, the NuRF removed 63% of total phosphorus (TP), or 2,050 pounds from Lake Apopka discharge. Lake Beauclair has responded with a 31% reduction in TP concentration to 72 ppb from the previous 7-year average of 104 ppb.

Between March 2, 2009 and March 1, 2010 the NuRF treated slightly over six billion gallons of water and injected 1,179,535 gallons of liquid aluminum sulfate (alum) at a cost of \$858,918. Approximately 7,460,000 gallons of floc were dredged from the settling ponds and pumped to the centrifuge for processing. Approximately 1,850 cubic yards of semi-dry alum residual were produced and the dried material has been kept on site to stabilize the clay soils.

Average daily flow through the NuRF was at or below the minimum discharge of 23 cubic feet per second (cfs) for the entire year. This indicates that most, if not all of the incoming water underwent pre-treatment by the St. Johns River Water Management District's Marsh Flow-Way (MFW). Inflow TP concentration ranged from 22 ppb to 230 ppb and averaged 87 ppb. Outflow TP concentration ranged from 14 ppb to 80 ppb and averaged 32 ppb. It is important to note that the NuRF's average discharge TP for this period is equal to Lake Beauclair's TP TMDL.

The alum concentration used at the NuRF was normally 10 mg Al/L. Staff increased the concentration experimentally on several occasions to determine the impacts to water clarity and formation of microfloc. Dose rates of 13 mg/L resulted in a dramatic increase in clarity (measured as Secchi depth) from 1.8 m to 4.5 m over the course of several days. Several other methods are being tested to potentially reduce microfloc formation while maintaining the original 10 mg/L concentration target.

To date, the NuRF has performed within the range of its expected parameters. Some improvement of the immediate downstream ecosystem is evident and additional rainfall coupled with increased Lake Apopka discharge and Flow-Way treatment will promote accelerated ecosystem recovery. Staff recommends continued experimentation with several new flow configurations to promote better floc formation while increasing the alum concentration as necessary to control microfloc.

Water Quality Impacts

Lake Beauclair is the first lake downstream of the NuRF and will be the first lake to exhibit water quality effects from it and other restoration efforts in the area. Improvements are expected

as a function of incoming TP concentration and will occur at a rate directly proportional to Lake Apopka discharge.

Improved water quality in Lake Beauclair will promote beneficial submerged aquatic vegetation and increased ecosystem diversity capable of sustaining desirable fish populations and increased recreational activities on the lake. Over time, these improvements are expected to carry downstream to Lakes Dora, Eustis and Griffin as well.

In 2004, Dr. Harper provided probable impacts to Lake Beauclair as part of the NuRF Preliminary Design Report. Two incoming TP concentration scenarios are provided in Dr. Harper's table along with projected changes in TP, chlorophyll-a (Chl-a) and Trophic State Index (TSI) at the highest average flow scenario. It is important to note that this is a long-term model and actual flow rate from Lake Apopka will have a significant impact on year-to-year values. The table is best used to gauge the long-term success of the NuRF but it is also a suitable benchmark for annual performance.

During the past year, the NuRF treated approximately 6,019,305,600 gallons (18,472 ac-ft) or roughly 2.5 times the volume of Lake Beauclair. Average annual treatment volume was expected to range between 33,531 ac-ft and 54,092 ac-ft. This is 34% of the high and 52% of the low treatment scenarios.

Flow from Lake Apopka through the NuRF was maintained by the SJRWMD at or below the minimum discharge of 23 cfs and averaged 19 cfs. LCWA data indicates that 63% of the TP was removed by the NuRF with a total mass of 934 kg (2050 lbs). Inflow TP concentration ranged from 22 ppb to 230 ppb (average 87 ppb) and outflow TP concentration ranged from 14 ppb to 80 ppb (average 32). Average annual TP discharge concentration was identical to the TP TMDL target concentration established for Lake Beauclair. Treated volume was substantially less than the expected and the water quality improvements to the lake, although significant, are consequently less than the model predicts.

TP concentration for Lake Beauclair over the past ten years is provided in Figure 3 and includes data from the SJRMWD, Lake County and the Lakewatch program. All datasets indicate reductions in annual average TP concentration between the NuRF operating period and the prior seven years. St. Johns data indicates a 31% decrease from 104 ppb to 72 ppb. While this is a significant improvement, it is still 2.25 times greater than the TP TMDL target for Lake Beauclair and 1.85 times above what the model predicts. A significant source of internal TP loading is expected to be eliminated by the Lake Beauclair restoration project, however other sources still exist downstream of the NuRF. Reduced discharge is likely a significant cause as well.

Chl-a concentration for Lake Beauclair over the past ten years is provided in Figure 4 and includes data from the three sources listed above. Chl-a has been highly variable, but St. Johns data indicates a 12% drop in Chl-a from 130 mg/m³ to 115 mg/m³ over the previous seven years. Chl-a is primarily used as an indicator of algal density and sometimes provides an indication of water clarity although many other things affect clarity as well.

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Secchi depth from Lake Beauclair over the past ten years is provided in Figure 5 and also includes data from all three sources. Secchi data from Lake Beauclair is noticeably affected by high flow periods such as those during 2004 and 2005. Because of this, trends over the past ten years may not be an appropriate comparison. It is important to note that Secchi has increased 27% during the past year since 2006 when only minimum flow has been entering the lake. Also notable is the most recent Secchi reading of 2.26 feet from St. Johns which is the highest obtained in at least the past ten years.

Alum concentration was typically kept at 10 mg Al/L although higher doses, up to 13 mg Al/L, were used on an experimental basis. The typical dose rate was recommended by ERD based on optimum TP removal in jar tests from 2002 using raw Lake Apopka water and again in 2004 when the Flow-Way commenced operation. ERD based all economic data and certain engineering calculations on this concentration as well. For various reasons, including changes in water quality, this concentration may not always be optimal and the Board has the ability to modify it based on its own needs. Higher alum dose will increase operating cost and floc volume produced.

Flow-Way-treated water has provided the NuRF with the ability to produce exceptionally good water quality with TP concentrations below the Lake Beauclair TMDL target of 32 ppb on occasion along with periods of visibility greater than 4 m. While satisfactory TP removal has been achieved at 10 mg Al/L, 13 mg Al/L appears to have significantly reduced the formation of microfloc which causes turbidity issues and increases total aluminum and total phosphorus concentrations in the discharge water.

Microfloc is alum floc that remains suspended in the water and is generated when either the alum dose is too low or the floc is subject to over mixing or by some combination of both. Increasing alum dose is one method to reduce microfloc, but it could result in significant cost and further reduction in pH. There is some evidence to indicate a dose of up to 13 mg Al/L may be required under the current flow and water quality conditions to reduce microfloc and generate higher visibility in the NuRF discharge. Optimizing the mixing configuration may also reduce microfloc formation. Mixing is influenced by water velocity which may vary significantly throughout the day.

Depending on wind direction and speed, water in Lake Apopka experiences a seiche or a “slosh” much like water in a bowl when it is moved. This seiche will either force water away from or into the NuRF settling ponds resulting in some interesting effects. The effect is most pronounced at the inlet and an average daily flow of 23 cfs may range from 85 cfs to -0.2 cfs at any given point during the day. Regardless of the variability in velocity and flow, the appropriate alum dose is maintained because the flow sensor makes continuous adjustments to the alum pump. Under the current design, however, the aeration mixing system produces a constant force and is not proportional to the flow which may contribute to the formation of microfloc.

It is currently unclear how much impact the alum mixing configuration has to the formation of microfloc. Several easily implemented modifications have been attempted but no significant improvements were immediately observed. Staff plans to make one more modification to the

aeration system which should result in less turbulent mixing and less need for maintenance. Other modifications could be implemented relatively easily, but would be more expensive.

Although presence of microfloc in the NuRF discharge is apparent under the current dosing and mixing configuration, impacts to the aquatic environment are not so easily determined. Microfloc is particulate in nature and because of its relatively large size is not typically considered bioavailable. Microfloc is also highly charged and tends to stick to any surface it comes in contact with. There may, in fact, be a benefit to microfloc once it leaves the NuRF because it will continue to bind with suspended particles and dissolved P. Regardless of the significance of microfloc, it should be noted that aluminum concentrations are nearly equal to background by the time the water reaches the end of the Apopka-Beauclair Canal and Lake Beauclair aluminum concentrations have not been affected since the NuRF began operating.

It is important to point out that incoming water quality and flow conditions at the NuRF have been relatively stable over the past year. However, once Lake Apopka discharge exceeds the capacity of the Flow-Way (approximately 120 cfs), raw Lake Apopka water and suspended sediments will begin to mix with Flow-Way treated water prior to entering the NuRF. During higher flows, Lake Apopka water will make up the majority of NuRF inflow and water chemistry will change substantially. Staff expects that alum dose could be reduced under these conditions.

Facility Management and Operation

The NuRF was designed to operate using relatively simple processes and minimal staff. During the past year, these features were thoroughly tested under low flow conditions and both performed extremely well. The staff time and equipment performance required during high flow periods remains to be seen but is logically expected to increase.

The NuRF is separated into three component systems. The alum system is comprised of all necessary equipment to contain and deliver alum to the water entering the NuRF. The floc handling system consists of all the equipment necessary to move floc from the settling ponds, dewater it, and place it in the 20-acre containment area at the back of the facility. Finally, the gate system includes the structures required to control flow through the facility.

Alum System

The alum delivery system is composed of a velocity/flow meter, several wireless transmitters, two programmable logic controllers, a variable speed progressive cavity alum pump, an air compressor, a pH monitor, an alum flow meter, and various tanks and piping systems to deliver the air and alum from the alum building to the point of injection. All of this equipment has operated nearly flawlessly throughout the year, but staff is currently planning on reconfiguring the aeration mixing system. Staff is also currently developing calibration routines for this equipment which may require outside contractors.

The NuRF dosed 1,179,535 gallons of alum during the first year of operation at a cost of \$858,918. The price of alum changed three times during this period and ranged from approximately \$0.50 to \$0.76 per gallon or \$187.40 to \$286 per dry ton. Alum price is currently locked at \$187.40 per dry ton for the next year. Alum cost represents the largest portion of

operational expense at the NuRF but is also one of the least labor-intensive and easiest to manage because the delivery system is almost entirely automated.

At minimum flow and 10 mg Al/L alum concentration, approximately five alum tankers (4,500 gallons each) are required at the NuRF on a weekly basis. This amount of traffic is easily accommodated by the current gravel road. However, under higher flow conditions, the gravel road will need to support six or seven tankers per day and is likely to deteriorate rapidly based on prior experience. Staff proposes upgrading the road around the alum building to asphalt to accommodate additional traffic during high flow periods. Staff has \$20,000 in the budget available for road upgrades.

Floc Handling System

Floc handling is the most complicated and labor-intensive process at the NuRF. Aside from the settling ponds themselves, critical equipment includes two dredges, a floc tank and mixer, a progressive cavity floc pump, a polymer mixing system, a centrifuge, a conveyor, and a track loader. Two well pumps are also necessary for the operation. Each piece of equipment needs continuous preventative maintenance and service.

For the most part, all of this equipment has operated extremely well. The dredge system seems to require the most attention and has proven to be the most temperamental. Most problems have been solved without recurrence although the dredge needs to be fitted with a slightly smaller screen to prevent clogging from larger pieces of debris. Staff would also like to explore the possibility of outfitting the dredges with a computer control since they currently require manual attention every 25 minutes to change direction. If not attended within this timeframe, they pump clean water into the floc tank which requires additional expense to remove.

The floc tank is currently being examined to determine whether or not there has been excessive failure of the epoxy coating. Staff has noticed peeling paint around and within the tank and is in the process of draining the tank for further inspection. The manufacturer is currently planning to assist with this inspection process. The tank will need periodic maintenance and recoating to prevent excessive corrosion, but staff expected the frequency of maintenance to be every few years. Staff will return to the Board if any significant problems are identified.

Despite its complexity, the centrifuge and polymer mixing system has been among the most trouble-free pieces of equipment at the NuRF. Once the appropriate polymer was identified, the centrifuge has produced a consistent semi-dry product under a range of floc conditions. To date, the centrifuge has processed 7,460,000 gallons of floc and generated approximately 1850 cubic yards of semi-dry cake. Once ejected by the centrifuge, the cake is directed by a screw conveyor into to a storage area behind the centrifuge building. This area can hold enough cake produced during three 8-hour days of centrifuge operation.

The final step in dewatering the alum floc is transport to a drying area. Staff utilized various types of equipment throughout the year to move the cake to the appropriate location in the containment area. Wheeled vehicles were not ideally suited for task and routinely sank in the soft sand and clay, particularly when it was wet. The most effective piece of equipment has been a vehicle called a track loader. The loader's tracks spread the vehicle weight out over a large

surface area and prevented sinking. The loader is currently rented, however staff would like to explore the possibility of purchasing a modified and slightly larger version of the same vehicle.

Once dry, the dewatered alum floc is called alum residual and it is very useful for stabilizing the soft soils within the containment area. Once a sufficient amount of alum residual has been spread over the containment area, the Board may consider having the material trucked away for other beneficial uses. The St. Johns River Water Management District expressed interest in the material several years ago because of its ability to bind phosphorus in nutrient-rich soils. It may be advisable to investigate the effects of residual polymers in the alum residual prior to use in restoration activities.

Gate System

There are four gate structures at the NuRF including two sluice gates at the south end of each pond and two weir gates at the north end. Each gate is controlled by an electrical actuator capable of adjusting the position of the metal gate. Once some initial gate configuration was adjusted, all gates have functioned properly.

Flow through the NuRF is remotely controlled by the St. Johns River Water Management District using the LCWA's weir gate actuators installed at the north end of both settling ponds. The District regulates flow based on velocity determined by its own equipment located within the discharge canal. This data is sometimes slightly different than that provided by the LCWA's velocity meter located at the inflow. Staff is working with the District to determine the reason for this.

The top of the weir gate sits about two feet below the top of the water under normal circumstances and the gate is opened by pushing downward. LCWA and District staff work together to determine how flow is divided between the ponds. Under low flow conditions, operation of a single pond appears to be the best configuration because it reduces the amount of microfloc and moves the floc further into the settling pond. At higher flows, it will be necessary to operate both ponds.

Occasionally, LCWA staff requests a "flushing" of the inflow canal. In this case, District staff will open the weir gates to their maximum settings for about one hour. Once the flush period is completed, the gates are closed and flow is slightly reduced accordingly for several days to make up for the extra volume released.

The LCWA also maintains two sluice gates at the south end of each pond. These gates are not used to control flow, but rather to isolate the ponds from each other and from the inflow canal. These gates have remained open since the facility began operating.

Land Management

Land management at the NuRF has consisted primarily of mowing and invasive control. During the summer months, staff uses a riding lawnmower as necessary and engages the help of contractors to periodically bush hog most of the open areas. Contractors also assist in slope mowing along the canals and with string trimming along the dredge rails and other structures.

The contractors have also helped trim back the cattails but more aggressive means may be necessary in the coming year.

The clay disposal areas appear to be largely stable. However, there are certain areas where erosion and sloughing have obviously occurred. There is no immediate need for action, although this may become an increasing problem in the future.

Water in the surrounding wetlands continues to rise along with Lake Apopka. In at least one instance, an isolated wetland by the inflow canal is expected to fill to the point where it will overtop the road at the southeast corner of the east settling pond. Staff is currently investigating the need to either build up the road or install a drain for the wetland. The latter may require permitting.

Staff is watching rising water elevations carefully for other reasons as well. The ground elevation surrounding the settlings ponds is less than a foot above the top of the regulatory range of Lake Apopka. Given the effects of seiche from Lake Apopka, the water level may routinely approach within inches of the top of inlet canal banks.

TP Monitoring

To date, staff has relied on laboratory analysis of TP which can take several weeks to process. Although the turnaround times for TP analysis should improve once MACTEC begins the sampling routine for FDEP, the results will still take ten days or more. Management of the NuRF would be more efficient if real-time TP data could be obtained. With real-time data, adjustments could be made to the dose rate to obtain more desirable outcomes resulting in potentially significant alum cost savings. In addition, changes to water quality under different flow rates would be discovered quickly. This would also allow the board to set windows of operation with corresponding dose rates for the NuRF if desired.

Real-time TP monitors are currently employed by the South Florida Water Management District with great success. There are also other methods which may be less expensive but require more labor and at least some laboratory equipment. Staff intends to present the options for rapid TP monitoring at the next board meeting.

Executive Director Recommendation:

Authorize staff to increase alum dose up to 13 mg Al/L during low flow to control microfloc and authorize Executive Director to release a bid for asphalt paving around the alum building and bring the results back to the Board for approval.

e. Reinvestment Options for Maturing CDARS

Linda Marino

The Water Authority is again soliciting proposals from local banks for the investment of approximately \$6,000,000 in excess operating funds for terms of 3 to 6 months. The solicitation has limited acceptable investments to Certificates of Deposit (CD) and Certificates of Deposit Account Registry Service (CDARS). The banks have been instructed to quote rates for periods of 3 months to 6 months and the interest rates quoted should remain in effect through March 30, 2010. The solicitation specified that the Water Authority would only purchase investments from institutions that are qualified public depositories by the Treasurer of the State of Florida.

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Because rates fluctuate so quickly staff requested the responses back by 4:00 p.m. on March 22, 2010. Staff will provide a summary of the responses at the Board meeting.

Currently the Water Authority has three investments:

Bank	Type	APY Interest	Amount	Maturity Date
BB&T	CD	1.0	\$6,000,000	3/28/2010
United Southern	CDARS	1.75	\$6,000,000	9/30/2010
SunTrust	CD	1.41	\$850,000	11/6/2011

Executive Director’s Recommendation:

Select a Certificate(s) of Deposit (CD) or Certificates of Deposit Account Registry Service (CDARS) to invest \$6,000,000.

- f. Assisting School Board with Travel Costs to NuRF & Hickory Point **Patricia Burgos**

At the February 24, 2010 Board meeting, trustees received an overview of the high school program that can be presented at the Nutrient Reduction Facility and the middle school program that can be presented at the Hickory Point Recreational Facility. An important component of the programs is the feasibility of students coming to the facilities to participate. Staff has heard from school board representatives, as well as teachers that money to fund field trips is in short supply. Trustee Harris has reviewed with the Board in the past the use of a portion of the un-awarded mini-grant funds to assist the school board by funding transportation costs for classes scheduled to visit NuRF and Hickory Point.

The 2009-2010 mini-grant budget was approved for a total of \$45,000 under the 500 and 700 Accounts. The Board included \$30,000 for the education mini-grant and \$15,000 for the community mini-grant in the budget. Based upon the awards, there is approximately **\$20,623.95** remaining. The available amount may differ at fiscal year-end due to unclaimed awards.

The following table provides a breakdown of the costs:

<i>Mini-grant program</i>	2009-2010 Budget	Money awarded to applicants	Balance Remaining
<i>Education</i>	\$ 30,000	\$ 11,485.89	\$ 18,514.00
<i>Community</i>	\$ 15,000	\$ 12,890.05	\$ 2,109.95
Total:	\$ 45,000	\$ 24,375.94	\$ 20,623.95

Currently the field trip rates for a school bus are \$3.25 per mile and \$16.00 per hour for a bus driver. The following are example of the cost for student visits:

EXAMPLE #1:

A Tavares Middle School field trip to visit Hickory Point is approximately 5 miles. At \$3.25/mile the mileage cost is \$16.25. A bus driver for 4 hours at \$16.00/hour would cost

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\$64.00 for a total cost of \$80.25 per class. Should 2 classes visit Hickory Point for the water resource program, it would cost \$160.50 to transport from the Tavares Middle School.

EXAMPLE #2:

A South Lake High School field trip to visit the Nutrient Reduction Facility is approximately 15 miles. At \$3.25/mile the mileage cost is \$48.75. A bus driver for 6 hours at \$16.00 would cost \$96.00 for a total cost of \$144.75 per class. Assuming 2 classes on one day, it would cost \$289.50 for two busses.

Staff would recommend that the Board set aside \$3,000 for bus transportation costs to allow up to six high school classes to visit the NuRF on three field trip days and up to six middle school classes to visit Hickory Point on three field trip days before June 2010 (end of school year).

The 3.5% *ad valorem* cap for the Education Account #500 is \$143,660. The Board has budgeted items are equal to \$141,077 which is \$2,583 under the cap.

Executive Director Recommendation:

Authorize the expenditure of \$3,000 for school bus transportation under Account 500-810 Aids to Government Agencies.

g. Palatlahaha River Blueway Request

Patricia Burgos

At the February 24, 2010 LCWA Board meeting, the Trustees considered a request by Richard Rubin, President, Synergy Solutions, LLC to have the Water Authority accept a wetlands conservation easement from Groveland as part of the town's Florida Communities Trust Grant application to acquire approximately 700 acres for conservation. Mr. Rubin also requested that the Water Authority Board consider designating the Palatlahaha River portion within this conservation easement as a "blueway." Chairman Farner indicated that the Water Authority was not the agency responsible for designating blueways within the county and that it was the Board of County Commissioners that had the authority. The Board, however, was willing to direct staff to look into this matter for the March 24th meeting and report back.

At the May 27, 2005 Board meeting, members heard an overview of the blueways program by the County. According to the 2005 staff memo, "A blueway is similar to a hiking trail for canoeists and kayakers. Physical and geo-positioned markers guide trail users through the waterways. An ideal blueway also includes an abundance of scenery and wildlife, as well as easy canoe access. Most importantly, each blueway designation requires the ability to respond to the water-borne emergency search and rescue situation. Lake County has identified four zones: The St. Johns River; Golden Triangle; Ocklawaha Basin; and the Palatlahaha Basin."

Staff contacted Tom Eicher, Lake County Parks and Trails Department regarding Mr. Rubin's request. The County staff was open to the idea, but requested in turn, that the Water Authority consider supporting an extension of the Palatlahaha River Blueway beyond the conservation easement to link up with the blueway already in existence on Lake Minneola. At issue are the Water Authority's Cherry Lake structure and the feasibility of having the public portage around the structure. The map below gives the Board an idea of the potential blueway on the Palatlahaha

River connecting to the established Lake Minneola Blueway. The concerns regarding the Cherry Lake structure include the following:

- Safety of the paddlers as they approach the structure;
- Potential trespassing issues of the public fishing from the structure; and
- Liability issues surrounding the structure and encouraging the public to portage around the structure.

Staff contacted Attorney Barice and County staff to determine the feasibility of this “expanded” blueway to Lake Minneola. The Blueways are a County program and not a Water Authority program and as such, the County would incur the cost to implement this expanded blueway. Due to budget constraints and increased personnel responsibilities, the County could not take on the financial responsibility to install fencing to prevent the public from accessing the structure, install signs to mark the portage route around the structure, and issue recreation permits/waivers. As such, staff is only recommending that the Board consider only that portion within the proposed Conservation Easement in its request to the Lake County BCC.

Executive Director’s Recommendation: Send the enclosed letter to the Board of County Commissioners recommending the addition of that portion of the Palatlakaha River from Arnold Boat ramp to where it meets the northeastern boundary of the proposed conservation easement.

h. Staff Review of Draft Extended Leave Policy

Michael Perry

At the December 2009 Board meeting staff detailed the issues and concerns regarding an extended leave policy and the references to the Family Medical Leave Act. The Water Authority does not employ enough people to be required to follow the FMLA law. Since the law constantly changes and there can be serious repercussions should the Water Authority not act in strict compliance to the law, the Labor Attorney has recommended that we remove any reference to the FMLA law in the personnel policies.

The Board took action to immediately remove Section 28 - Family/Medical Leave Policy and directed staff to develop a replacement extended leave policy for the January meeting for the Board’s review. The Board was concerned that without a policy, Water Authority employees would not have any extended leave policy in place and essentially removing a benefit the employees have had.

At the January 2010 Board meeting, staff presented a Draft Extended Leave Policy. Some Board members voiced some concern about the proposed changes. Because some of the changes resulted from recommendations from the labor attorney the morning of the Board meeting, the Executive Director requested an opportunity to review the document with staff to identify any of their issues and return to the Board should any changes be identified.

Staff reviewed the policy and generally felt that the policy has been revised to the benefit of the agency and to the detriment of the employee. Staff expressed concerns primarily about sections 4 and 13.

In section 4, staff was concerned that the language under the FMLA policy, “An eligible employee who takes leave, in compliance with the Family and Medical Leave Act, will be able to return to the same job, or a job with equivalent status, pay, benefits and other employment terms. The position will be the same or one which entails substantially equivalent skill, effort, responsibility and authority” was changed to “The Water Authority may return an eligible employee who takes leave, to the same or similar job, or to a different position which does not have equivalent pay, benefits and other employment terms as the original job, depending upon the needs and programs of the Water Authority.”

In section 13, staff was concerned about changing the word fraudulently to erroneously. Staff also expressed concern about the language, “subject to the needs and programs of the Water Authority, as determined by the Executive Director” that appears in several places in the policy.

Should the Board desire to address the concerns of staff, the attached draft policy identifies potential changes, highlighted in blue. Any changes that were made to the original policy as presented to the Board at the January meeting are highlighted in yellow. Language to be deleted would be stricken through and any additions would be underlined.

Executive Director Recommendation:

Approve the revised Policy 28 and include it in the Lake County Water Authority Policies and Practices Employee Manual.

- i. Amend BCI Agreement for Beauclair Restoration to Provide Archeological Services **Lance Lumbard**

The Army Corps of Engineers (ACOE) has been advised by the Division of Historical Resources (DHR) that the Lake Beauclair Restoration Project may have impacts to culturally significant artifacts which may be present within the project area. The attached letter indicates the steps required of the LCWA by the DHR in order to facilitate issuance of a permit by the ACOE. Much of the archaeological effort is to be conducted while the project is being constructed and the level of involvement during this time will be outlined in a plan submitted to and accepted by DHR prior to issuance of a permit by ACOE.

Staff has worked with BCI to obtain a scope of services for an archaeologist with Archaeological Consultants, Inc (ACI) to fulfill the requirements of the DHR. The attached proposal provides details regarding generation of the plan and a range of services which may be necessary to implement the plan depending on DHR’s requirements. The initial cost to produce the plan is \$2,000 and has already been authorized in the interest of time. The expense for training and observations may range from \$6,000 to \$12,000 depending on the final plan. The consultant’s time to complete the plan is approximately three weeks after issuance of the notice to proceed (issued March 11). DHR’s time to review and accept the plan will also be required.

Staff anticipates that FDEP is likely to issue a permit within 30 days after receiving a response to the 2nd RAI expected during the week of March 22 - 26. Staff will be working with the consultant, the DHR and the ACOE to ensure that the plan is ready and approved as soon as possible to expedite the permit process.

Executive Director Recommendation:

Authorize Executive Director to approve BCI's project scope for Tasks 6 and 7 for a total amount not to exceed \$14,000.

j. **Request to Rescind Two Board Policies**

Michael Perry

Trustee Fullerton has requested that the Lake County Water Authority Board of Trustees consider rescinding Policy 002 - Lake County Water Authority Non-Competition With Private Sector Policy, and the Policy related to an Alternative Attorney.

The Non-Competition With Private Sector Policy was established following a Board concern about the Water Authority accepting relocated gopher tortoises on Water Authority preserves when there was a local consultant doing the same service as part of his business. The Board was concerned about government, particularly the Water Authority, having an unfair competitive advantage for a similar service because its assets were purchased and maintained by the taxpayers. The policy was created to ensure that the Water Authority does not intentionally place the agency in direct competition with private sector businesses. Trustee Fullerton believes that the policy is no longer necessary and outdated.

The Alternative Attorney Policy was established following a concern about the Board's attorney at the time being a land use attorney and the potential that there may have been times when he may have been representing a client whose project the Water Authority Board may have been considering taking some action on. Trustee Fullerton was further concerned that she may need some legal opinions about a potential project that may come before the Board and wouldn't be able to discuss it with the Water Authority Board attorney if he is representing the potential project. As such, the Board selected an alternate attorney should the Water Authority attorney declare a conflict. Copies of the minutes where this item was discussed are attached as background information. Trustee Fullerton believes that Attorney Barice is not in a similar situation and as such, the policy is no longer necessary. Trustee Fullerton further believes that Attorney Barice ought to be able to select her own alternate if she is not able to represent the Board.

Executive Director's Recommendation:

Provide direction to staff regarding keeping or rescinding the policies in question.

5. **Public Comment (5:00 p.m. or as soon thereafter as possible)**

6. **Legal Staff Report**

7. **Action Items**

a. **Resolution to Amend Fiscal Year 2009-2010 Budget and Create an Alum Reserve**

Linda Marino

The Cash Carry Forward budget estimate is based on anticipated expenditures and revenues between the time the draft budget is assembled and the year is closed out. The exact amount is determined at the completion of the audit. When the final figure is determined the budget is adjusted accordingly.

Separately the Board has discussed the need to create a reserve account for alum. The Board budgeted \$1.5 million for average water flows through the Nutrient Reduction Facility, but it's estimated that 50% of the time higher than average water flows can be expected.

At last month's Board meeting staff was directed to create an alum reserve account in the amount of \$1,706,351 on the expenditure side of the budget to be offset on the revenue side with an increase in Cash Carry Forward by the same amount to account for the final audit figure.

If approved Operating Expenditures will remain the same and the reserve account will be added:

Operating Expenditures Account 700-520 - \$1.5 million of the total is for alum

Alum Reserve Account (Acct # TBD) - \$1,706,351

When alum funds in account 700-520 become low staff will request that the Board approve a budget transfer from the reserve account into 700-520. At the end of the fiscal year any remaining funds in either account will be available to be re-budgeted as the Board sees fit for next fiscal year. Staff anticipates budgeting a total of \$4 million for alum in fiscal year 2010-2011.

Executive Director's Recommendation:

Adopt Resolution 2010-02 amending the Fiscal Year 2009-2010 budget and creating an alum reserve account.

b. Flat Island Preserve Archery SUA Renewal & Amendment **Patricia Burgos**

In the fall of 2008, staff was contacted by local citizens seeking an area on Flat Island Preserve to conduct archery activities and competitions. The Water Authority had allowed another group to use the same site over nine years ago. The previous group had built an assignment board and had cleared narrow alleyways for multiple targets. The site was abandoned in 2000-01 due to low membership and loss of interest. The Board approved the new request from this group in August 2008 and issued a Special Use Authorization for archery activities at Flat Island Preserve.

More than a year has gone by and staff has noted that the new group is very respectful of the Preserve, maintaining the area while being able to conduct its activities without disturbing the resident tortoises. The group is very good about signing in and out at the kiosk and staff has had no complaints from the public regarding this usage. The Special Use Authorization has expired, and the group would like to renew the agreement. Staff is recommending that the SUA be renewed for 2010. This group provides the Water Authority with a certificate of insurance and liability releases for each member.

The archery group is also requesting permission to expand their area of operation and reclaim some of the old shooting lanes in the wooded area south of their current area (see attached map). This is the area that the previous archery group had used. The group is requesting permission to reestablish the four shooting lanes. This reestablishment includes trimming the vegetation, installing targets, and reconditioning additional items such as signs, bow racks, and benches, which were left there by the previous group. Staff has no difficulties with this request considering their past behavior within the Preserve. The location of the requested site, which is

removed from the main trails and facing the Okahumpka Marsh, minimizes any conflict issues with hikers or campers.

Executive Director Recommendation:

Authorize the Executive Director to renew the Special Use Authorization for Archery Activities at the Flat Island Preserve and include the additional archery area.

c. Project Modification of City of Eustis Stormwater Project **Lance Lumbard**

In the fall of 2008, staff was contacted by local citizens seeking an area on Flat Island Preserve to conduct archery activities and competitions. The Water Authority had allowed another group to use the same site over nine years ago. The previous group had built an assignment board and had cleared narrow alleyways for multiple targets. The site was abandoned in 2000-01 due to low membership and loss of interest. The Board approved the new request from this group in August 2008 and issued a Special Use Authorization for archery activities at Flat Island Preserve.

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Executive Director Recommendation:

Authorize the Executive Director to renew the Special Use Authorization for Archery Activities at the Flat Island Preserve and include the additional archery area.

8. Board Member Comments

9. Board Member Items for Future Agenda

10. Information Items

- a. Staff Report
- b. Monthly Financial Reports – February 2010

- 11. Announcement of Upcoming Meetings and Events**
- NuRF Open House – Thursday, April 22, 2010 (9 a.m. – 12:00 p.m.)
 - Board Meeting – Wednesday, April 28, 2010 (3:30 p.m.) BCC Chambers/
Admin. Building

- 12. Adjournment**